REMARKS

Overview and Formalities

Claims 1-68 are all the claims currently pending in this Application. Claims 69-71 were cancelled in the Preliminary Amendment of January 14, 2005. Claims 38-68 are withdrawn pursuant to the Response to Restriction of January 19, 2007. Accordingly, Applicant notes that the Examiner's listing of claims 1-71 as pending is incorrect.

Applicant thanks the Examiner for returning a signed and initialed copy of the PTO form submitted with the Information Disclosure Statement of October 4, 2007, indicating that the references listed therein have been considered.

In this Action, the Examiner maintains the previously-presented rejections of the claims and provides a "Response to Arguments" at pages 6-7 of the Office Action.

Claim Rejections

Claims 1, 2, 10-26, and 31-37 are rejected under 35 U.S.C. § 102(e) as allegedly unpatentable over Jeon (U.S. Patent 6,586,349). Claims 3-9 and 27-29 are rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Jeon. Claim 30 is rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Jeon in view of Green (U.S. Publication 2003/0219972).

Applicant submits that claim 1 is patentable over the cited Jeon reference. For example, claim 1 recites, "wherein said least one silicon oxide region composed of a silicon oxide not containing said at least one metal element, at least one metal rich region having high concentration of said at least one metal element, and said at least one silicate region which is

located between said silicon oxide region and said metal rich region and has lower concentration of said at least one metal element than that of said metal rich region."

Applicant submits that Jeon fails to teach or suggest the above feature. Rather, Jeon teaches that sub-layers 120 and 132 (the lowermost and the uppermost sub-layers, respectively) are made of the *same* dielectric material. It follows that the lowermost and uppermost sub-layers have the same level of metal element in contrast with the claimed invention and as claimed in claim 1.

The above argument was previously-presented. The Examiner, however, has failed to respond thereto. Accordingly, if the rejection is to be maintained, Applicant respectfully requests that the Examiner specifically address this argument.

Since claims 2, 4-29 and 31-37 are dependent upon claim 1, Applicant submits that such claims are patentable at least by virtue of their dependency. By this Amendment, Applicant has incorporated claim 3 into claim 1. Accordingly, claim 3 has been canceled without prejudice or disclaimer.

In further regard to claim 4, Jeon fails to disclose or suggest "said silicate region has composition modulation in which composition of said at least one metal element increases as closer to said metal rich region and decreases as closer to said silicon oxide region."

The above argument was also previously-presented, and the Examiner has also failed to specifically respond to this argument. Accordingly, Applicant respectfully requests that the Examiner specifically address this argument if the rejection is to be maintained.

In further regard to claims 27-29, Jeon fails to disclose or suggest: a "composition modulation in which composition of silicon in a film thickness direction is high in the lowermost portion and uppermost portion and low in the central position", as recited in claim 27; a "composition modulation in which composition of at least one metal element in a film thickness direction is low in the lowermost portion and uppermost portion, which are located in the vicinity of said silicon region, and high in the central portion", as recited in claim 28; and "wherein an Equivalent Oxide Thickness of said insulating film structure is smaller than the Equivalent Oxide Thickness of a silicon oxide film into which said at least one metal element is diffused", as recited in claim 29.

Regarding these features, the Examiner cites *In re Boesch* and asserts that "it would have been obvious ... to form the device parameters such as the concentration distribution and composition modulation having the desired values, since it has been held that discovering at optimum value of a result effective variable involves only routine skill in the art." (Office Action, pages 5-6)

However, the Examiner's application of *In re Boesch* is incorrect. MPEP §2144.05(II)(B) specifically emphasizes that "A particular parameter must first me recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation." In fact, MPEP §2144.05(II)(B) notes that in *In re Boesch*, prior art specifically suggested proportional balancing to achieve desired results in the formation of an alloy. Thus, in

in re Boesch, there was a specific teaching in the prior art that the variable was a "result-effective" variable.

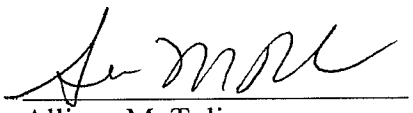
With respect to the present Application, there is no teaching or suggestion in the prior art that any of the variables recited in claims 27-29 are result effective variables. Therefore, if the Examiner intends to maintain the rejection of these claims over Jeon, the Examiner must specifically point out how the prior art indicates that the claimed variables are "result-effective" variables.

Finally, since claim 30 is dependent upon claim 1 and Green fails to cure the deficient teachings of Jeon, at least in regard to claim 1, Applicant submits that claim 30 is patentable at least by virtue of its dependency.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



Allison M. Tulino
Registration No. 48,294

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE
23373
CUSTOMER NUMBER

Date: August 1, 2008